

# Advanced Structural Composites

B R I G H A M   Y O U N G   U N I V E R S I T Y



## CENTER

The objective of the Center for Advanced Structural Composites is to commercialize the IsoTruss technology. The IsoTruss enables the creation of super lightweight grid structures with the potential for revolutionizing industries as diverse as civil infrastructure (e.g., communication and construction), aerospace, automotive, marine and sporting structures and virtually any application area requiring high strength, high stiffness, light weight and superb corrosion resistance.

## TECHNOLOGY

The core technology consists of an ultra-lightweight composite structural shape known as the IsoTruss. The IsoTruss is a novel, patented, three-dimensional structural form that takes advantage of the highly directional properties of high strength composites to produce an extremely efficient and lightweight structure. The IsoTruss incorporates stable geometric configurations with helical members that spiral in opposing directions around a central cavity, coupled with longitudinal members that pass through the intersections.

## ACCOMPLISHMENTS

A new Utah firm, known as IsoTruss Structures Inc., licensed the rights for domestic commercial applications and has begun to sell products, aiming to first displace wooden utility poles. Conventional poles weigh half a ton and last 5-40 years, while IsoTruss poles weigh 300 pounds and are expected to last 60-100 years for the same price, while costing less to transport and install.

## THINK TANK

What if there was...

**A corrosion free  
power line tower that  
weighed far less than  
existing steel towers  
but could resist high  
winds, bear heavy  
loads, and remain un-  
affected by extreme  
temperatures?**



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